

From: [Stan Van De Wetering](#)
To: [Eric Blischke/R10/USEPA/US@EPA](#); [Chris Thompson](#); [Chip Humphrey/R10/USEPA/US@EPA](#); [jeff.baker@grandronde.org](#); [robert.neely@noaa.gov](#); [Ron Gouquet](#); [tom downey](#); [Billy Barquin](#)
Subject: Issues with termination of Oct ammocoete sampling
Date: 10/10/2006 11:08 AM

Eric:

I wanted to raise some concerns re ending this falls ammocoete sampling sooner than later. I only have a few minutes so I will try to be as brief and direct as possible. First I want to say I was very impressed with the sampling crew and all the effort they are putting forth. They are a top notch group. I spent five or so hours with them on Monday. As I suspected I was of no real help as far as finding the "secret" lamprey spots. But it was very helpful to see what Thai Do and crew were finding and where they were finding it.

As I have mentioned in past meetings I feel it is important to keep in mind habitat availability in relation to the temporal scale. What we have observed in not so large coastal rivers is as follows:

- 1) During the winter season your optimal velocity habitats are least available and found on the stream's margins. This season of course is the season that the river's overall morphology is set up based on various forces available during storm events.
- 2) During the spring season or moderate flow season, you normally experience the greatest diversity in habs and or velocities. This allows for more "optimal" velocity hab availability overall. This allows for more access to a greater range of substrate types during a period when more optimal microbial habitat is available as well (based on our limited research).
- 3) During the summer or low water season you have just the opposite setting. Most of your winter high velocity habitats are now "dead" water. Most of your spring optimal velocity habitats are not available. Those substrates that were associated with the storm event that set up the river's morphology are likely still there but the optimal spring velocities, feeding lanes and microbial production etc have shifted significantly - in a negative direction. The optimal velocity habs are as limited as during the winter season.

So the point here is that it can be more difficult to find ammocoetes during the low flow period because the patchiness of habitat and in turn amms increases. Our coastal summer data show this very well. We have experienced sites where we move from a single plot in a sandy substrate that has a high level of microbial activity and several hundred ammocoetes per square meter to an adjacent plot (two feet over) with very limited microbial activity and very similar substrate and we see less than a few ammocoetes. Again this idea of patchiness and the ability to work that into a sampling design is difficult.

So my Monday with the crew suggested to me that we have some patchiness occurring in the harbor similar to other sites we have worked. This idea is supported by the results from Monday's work. Thai Do's crew took us back to a particular polygon that had very little sampling success. Thai chose to return to a single plot where a single (?) ammocoete had been found. We spent the next four hours working in that immediate plot "zone" if you will. As you know we found several other amms there and on a pretty consistent level - 2 or so per run. As we drifted out of that immediate plot zone we lost our ability to collect amms again. Again to me this supports this patchiness presence.

I think it would be of great use to the group to have Thai Do's crew spend some more time returning to the sites they have worked already and explore those specific plots where one or two amms were previously captured. Essentially repeat Monday's approach. If there is some consistency with catching amms in small patches then we can use those small patch data to better expand the data for the whole project. That is we could better expand fall rearing numbers per polygon.

There are a few other issues I want to make sure don't leave everyone's minds. First "we" seem to be assuming that when we catch only one amm in a sample plot that the result is an number that is abnormally low for the Willamette River as a whole - considering river mile zero to say 90. We have no leg to stand on here. We are not planning any upstream sampling to assist with a validation process. As well I am not aware of any general

```

>      <eric.blishcke@USEPA.gov>
>      EILT.D.net>
>
>      10/06/2006 01:18
>      PM
>
>      Eric Blischke/R10/USEPA/US@EPA,
>      Burt Shephard/R10/USEPA/US@EPA,
>      Chip Humphrey/R10/USEPA/US@EPA,
>      Curt Black/R10/USEPA/US@EPA, Dana
>      Davoli/R10/USEPA/US@EPA, GAINER
>      Tom <GAINER.Tom@deg.state.or.us>,
>      Gina
>      Grepo-Grove/R10/USEPA/US@EPA,
>      jeff.baker@grandronde.org,
>      Jennifer L Peterson
>      <PETERSON.Jenn@deg.state.or.us>,
>      jeremy_buck@fws.gov,
>      anderson.jim@deg.state.or.us, Joe
>      Goulet/R10/USEPA/US@EPA, Judy
>      Smith/R10/USEPA/US@EPA,
>      Kathryn.Toepel@state.or.us,
>      Kristine Koch/R10/USEPA/US@EPA,
>      Lisa.Estensen@grandronde.org,
>      MCCLINCY Matt
>      <MCCLINCY.Matt@deg.state.or.us>,
>      OMEALY Mikell

```

